CLAIMS

1. A production method of a vinyl polymer comprising treating a halogen group-containing vinyl polymer (I) with an oxy anion compound to thereby reduce the halogen content of the polymer.

2. The production method according to Claim 1, wherein the vinyl polymer (I) has a halogen group at a molecular chain terminus.

3. The production method according to Claim 1, wherein the vinyl polymer (I) has a functional group other than a halogen group in a terminal structure thereof in addition to the halogen group.

4. The production method according to Claim 3, wherein the functional group in the terminal structure of the vinyl polymer (I) is selected from the group consisting of alkenyl, hydroxyl, silyl, amino and epoxy groups.

5. The production method according to Claim 4, wherein the functional group in a terminal structure of the vinyl polymer (I) is an alkenyl group.

6. The production method according to Claim 5, wherein, when the vinyl polymer (I) has an alkenyl group in a terminal structure thereof, after the elimination of the halogen group by means of an oxy anion compound, a crosslinkable silyl group-containing hydrosilane compound is caused to be added to said alkenyl group.

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7. The production method according to any of Claims 1 to 6, wherein the oxy anion compound has no functional group

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other than an oxy anion group.

8. The production method according to any of Claims 1 to 7,

wherein the oxy anion compound has a group represented by the general formula 1:

$M^+O^--R^1-$ (1)

in the formula, R^1 represents an organic group, which may optionally contain one or more ether or ester linkages, and M^+ represents an alkali metal ion or a quaternary ammonium ion.

9. The production method according to Claim 8,

wherein, in the general formula 1, R^1 is an organic group represented by the following general formula 2:

$-C(=O)-R^2-$ (2)

in the formula, R^2 represents an organic group, which may optionally contain one or more ether or ester linkages.

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10. The production method according to Claim 8 or 9, wherein, in the general formula 1 or 2, R^1 or R^2 is a univalent or bivalent organic group.

11. The production method according to Claim 9 or 10, wherein, in the general formula 2, R^2 is an aromatic group.

12. The production method according to any of Claims 8 to 11,

wherein, in the general formula 1, M^+ is a potassium ion.

13. The production method according to any of Claims 1 to 7,

wherein the oxy anion compound comprises at least one salt selected from the group consisting of alkoxide salts, phenoxide salts and carboxylate salts, and the counter ion thereto is an alkali metal ion or a quaternary ammonium ion.

14. The production method according to Claim 13, wherein the oxy anion compound is a univalent or bivalent carboxylate salt.

15. The production method according to Claim 13, wherein the oxy anion compound is derived from any of benzoic acids or an acetic acid.

16. The production method according to any of Claims 1 to 15, wherein the vinyl polymer (I) is produced by atom transfer radical polymerization.

17. The production method according to Claim 16, wherein the terminal halogen group of the vinyl polymer (I) has a structure represented by the general formula 3:

$-C(R^3)(R^4)(X)$ (3)

in the formula, R^3 and R^4 are the same or different and each represents a hydrogen atom or a univalent organic group respectively derived from a group bound to a polymerizable carbon-carbon double bond group in the vinyl monomer constituting said polymer, and X represents a chlorine, bromine or iodine.

18. The production method according to Claim 16, wherein, in atom transfer radical polymerization, the terminal halogen group of the vinyl polymer (I) is a halogen group resulting from addition of an olefin compound having low polymerizability to a polymer terminus upon addition of the olefin compound during or at the end of the polymerization.

19. The production method according to any of Claims 1 to 18, wherein a main chain of the vinyl polymer (I) is a (meth)acrylic polymer.

20. The production method according to Claim 19, wherein the main chain of the vinyl polymer (I) is an acrylic polymer.

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21. The production method according to any of Claims 1 to 18, wherein the main chain of the vinyl polymer (I) is a styrenic polymer.

22. The production method according to any of Claims 1 to 21, wherein a ratio (Mw/Mn) between weight average molecular weight (Mw) and number average molecular weight (Mn) of the vinyl polymer (I) is less than 1.8 as determined by gel permeation chromatography.

23. The production method according to any of Claims 1 to 22, wherein the number average molecular weight of the vinyl polymer (I) is within the range of 500 to 100,000.

24. A vinyl polymer which is producible by the production method according to any of Claims 1 to 23.

25. A curable composition which comprises the vinyl polymer according to Claim 24 having a crosslinkable silyl group in a terminal structure thereof.

26. A curable composition which comprises (A) the vinyl polymer according to Claim 24 having an alkenyl group in a terminal structure thereof and (B) a hydrosilyl group-containing compound.